

July 2015

Washington County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 14 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Washington County economy.¹ These 14 sectors have a total direct output of approximately \$294 million and support 921.4 jobs in Washington County. Running the model for all 14 sectors simultaneously produces the following results:

Agriculture Contribution in Washington County

Impact Type ²	Employment	% of Total Employment	Total Value Added ³	% of Gross Regional Product ⁴	Output ⁵	% of Gross Regional Product
Direct Effect	921.4	29%	\$118,273,088	50%	\$294,448,717	123%
Indirect Effect	221.1	7%	\$15,231,575	6%	\$26,805,068	11%
Induced Effect	128.3	4%	\$8,168,308	3%	\$14,420,046	6%
Total Effect	1,270.9	39%	\$141,672,971	59%	\$335,673,832	141%

As shown in the above table, agriculture, food, and food processing supports 1,270.9 jobs, or 39% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$336 million, roughly 141% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 14 agriculture, food, and food processing sectors is approximately \$142 million, or 59% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 59% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:
https://implan.com/index.php?option=com_content&view=category&id=19

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

⁴ GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

⁵ Output = Intermediate Inputs + Value Added

In the top ten by employment, Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming is the top employer in the agriculture industry with 241.9 employees. This table also shows the amount of jobs that are created by the agriculture industry in Washington County.

Top 10 Industries Affected by Employment

Sector Description:	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	241.9	\$76,050,242
Animal production, except cattle and poultry and eggs.....	222.6	\$27,361,311
Grain farming	130.5	\$55,431,755
Dairy cattle and milk production	88.5	\$19,996,598
All other crop farming.....	77.3	\$11,899,232
Farm machinery and equipment manufacturing.....	65.4	\$39,681,822
Support activities for agriculture and forestry	63.7	\$4,015,361
Wholesale trade.....	48.8	\$9,579,311
Landscape and horticultural services	36.7	\$1,464,074
Full-service restaurants.....	26.3	\$914,926

The Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming industry directly contributes approximately \$76 million to Washington County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Top 10 Industries Affected by Output

Sector Description:	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	241.9	\$76,050,242
Grain farming	130.5	\$55,431,755
Oilseed farming	20.5	\$53,928,279
Farm machinery and equipment manufacturing.....	65.4	\$39,681,822
Animal production, except cattle and poultry and eggs.....	222.6	\$27,361,311
Dairy cattle and milk production.....	88.5	\$19,996,598
All other crop farming.....	77.3	\$11,899,232
Wholesale trade.....	48.8	\$9,579,311
Owner-occupied dwellings	0.0	\$4,743,402
Bottled and canned soft drinks & water.....	5.8	\$4,528,223

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Washington County's economy.

[illegible]

All 105 counties in Kansas have IMPLAN models with an agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.